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Spontaneity and Materiality:

What Photography is in the Photography of James Welling

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Images are double agents. They receive information from the world, while also projecting visual imagination onto the world. As a result, mind and world tug our thinking about images, or particular kinds of images, in contrary directions. On one common division, world traces itself mechanically in photographs, whereas mind expresses itself through painting.¹

Scholars of photography disavow such crude distinctions: much recent writing attends in detail to the materials and processes of photography, the agency of photographic artists, and the social determinants of the production and reception of photographs. As such writing makes plain, photographs cannot be reduced to mechanical traces.² Yet background conceptions of photography as trace or index persist almost by default, as no framework of comparable explanatory power has yet emerged to replace them.

A conception of photography adequate to developments in recent scholarship is long overdue. Rather than constructing such a conception top-down, as philosophers are wont to do, this paper articulates it by examining selected works by James Welling.³ There are several reasons for this: Welling's practice persistently explores the resources and possibilities of

photography, the effect of these explorations is to express a particular metaphysics of the mind's relation to its world, and appreciating why this metaphysics is aptly expressed by exploring photography requires a revised conception of what photography is. In as much as it provides a framework for a richer interpretation of Welling, the new conception is also capable of underwriting a wide range of critical and historical approaches to photography.

Prologue: *Aluminum Foil*

Welling's artistic breakthrough came in 1980 with a series of silver gelatin contact prints of 4 × 5" Kodak Tri-X negatives depicting aluminium foil. Taken as a whole, *Aluminum Foil* constitutes a remarkably resolved and uncompromising early artistic statement. Though, technically speaking, the prints could have been produced any time during the previous hundred years, they would have been hard to anticipate prior to their creation, given the many norms of photography they seem happy to forgo.⁴ Pictorially, they are difficult to resolve. They have an unrelenting, 'all-over' quality, appearing harshly lit yet very dark – an effect achieved by over-exposing in camera to secure sufficient density of detail in the shadow, then over-exposing again when printing to bring out that detail.⁵ Instead of the glittering array of reflections that one might associate with crumpled foil, one finds expanses of black or deep shadow

punctuated by febrile highlights. Commentators often call these works ‘abstract’, but this description needs to be qualified. It may not be obvious what they depict, but all can be seen as depicting something, and that something turns out to be crumpled foil filling the surface from edge to edge (*plate 1* and *plate 2*).

Even so, *Aluminum Foil* resists familiar modes of engaging with photography. Nothing in them marks a horizon. Only indentations, ridges, and crevices relieve the shallow space. Natural phenomena are suggested: rocky surfaces laced with crevices, turbulent seas, impenetrable foliage, even dense cloud, but nothing so much as the surface of an alien, lifeless planet. The sensation is not one of looking out into a landscape oriented to the upright posture of a human body, into which one might imaginatively project oneself, but of looking down onto an unyielding topography that frustrates the eye’s ability to explore it. One can more easily imagine hovering over such a surface, than walking through it. The dominant mood is one of suffocating airlessness. David Salle described Welling’s early work as ‘pure death wish’.⁶

Shaping the series is an engagement with materials that can be traced all the way back to Welling’s pre-CalArts training in painting and sculpture. Consider the manipulation of foil. Something has taken place off camera that these photographs record, something ‘hands-on’ (*plate 3*). The work is expressive

rather than cool, but its expressiveness is restrained and pivots almost entirely on minor variations between images. Indeed, the depth of self-restraint and refusal to emote evinced by these images is responsible for their emotional force. But it is not only foil that has been manipulated here. Light has also been controlled, as much through the foil's reflective properties as by camera and enlarger.⁷ Control of light is a recurring theme of Welling's work, in both his camera-less darkroom practices and his lens-based photography. In *Aluminum Foil*, Welling's parsimonious rationing of light yields images that are pictorially hard to read – claustrophobic, lacking identifiable space, depth, or orienting reference points. Early on Rosalind Krauss drew attention to Welling's tendency – contrary to the presumed nature of photography – to 'hold the referent at bay, creating as much delay as possible between seeing the image and understanding what it is *of*', and Welling has often spoken of his desire to overload his images, making them dense and difficult to decipher.⁸

Who could have predicted, from looking at *Aluminum Foil*, the large, intensely coloured photograms of plumbago blossoms radiating light, generated from scratch in the darkroom (*Flowers*, 2004–7, 2011, 2014)? Or the dazzling, sometimes jarring, studies of Phillip Johnson's *Glass House* filtered and reflected through coloured gels, diffraction gratings, and mirrors (*Glass House*, 2006-9)? Or the small, gestural abstractions

printed in cliché verre from paint on mylar as a counterpoint to Susan Howe's *Frolic Architecture* (2010)? And how do any of these gel with the straight black and white series, such as *Connecticut Landscape* (1998–), *Railroad Photographs* (1987–1994), or *Light Sources* (1977–2005)?

This diversity calls for an account of what Welling is up to. The resolute manipulations of the materials, processes, conventions, and norms of photography is hard to miss. Just as obviously, Welling's manipulations engender powerful effects. Critics have remarked on both, yet a puzzle remains.⁹ Every artist seeks a consonance between means and ends: a choice of means opens up a range of ends, just as a particular end inflects the use of means. The puzzle is to understand the relation between Welling's exploration of photographic resources, on the one hand, and his interest in diverse expressions of the self's relation to its world, on the other. Solving this puzzle in Welling's case requires articulating a new conception of photography that illuminates Welling's interventions in various stages of the photographic process. That done, a question arises as to what Welling's explorations of photography reveal about his work's substantive and thematic concerns. But the new conception should serve the purposes of critics and historians more generally.

Photography Materialized

Welling's oeuvre invites philosophical reflection because it not only raises the question of what photography is (and has been), but also the question of what photography might be. Of course, much photography invites theoretical reflection, where 'theory' deals with what particular forms of photography mean or do in particular contexts of production and reception. The philosophy of photography, by contrast, attempts to articulate what constitutes photography – what might be called its fundamental 'nature'.¹⁰ The enterprise is easily caricatured as a quest to pin down an immutable essence insensitive to cultural or historical context, but it need not be regarded in this way. Philosophical conceptions of photography are better understood as tools for counterfactual thinking – for imagining photography's possibility space, and for thereby appreciating all that can be done to make images by means of photography. By persistently exploring the resources and possibilities of photography from the inside, Welling is arguably doing philosophy by other means. Each of his series offers a practical demonstration of some hypothetical photographic possibility.

If this is what Welling is up to, it only pushes the interesting question back a step: for why is he interested in doing that? Welling's explorations are not formal experiments conducted for their own sake; each series draws attention to a particular emotional inflection of the self's relation to its world.

Seen as a whole, Welling's oeuvre is a vehicle for expressing a wide-ranging metaphysics of mind and world. The conception of photography proposed here is intended not only to make sense of that general project, but to illuminate selected series within it.

Looking beyond Welling, one finds that criticism and theory of photography often harbour philosophical assumptions, more or less implicitly. Take sensitivity to counterfactual possibility: any artistic gesture – whether deliberate or aleatory – is meaningful only when viewed against an implied background of other possible gestures. Just as obviously, the meaning of an interpretation is situated in a space of alternative possible readings. Background assumptions about what photography is capture what is possible in the medium and generate the counterfactual spaces within which criticism takes place. The lesson is not that theory cannot proceed without philosophy. It typically does. It is rather that those moments when philosophy emerges from the background, as it does when prompted by Welling, repay attention.

On default conceptions, photography is understood as a mechanical process for producing 'natural' signs that (typically) resemble their causes. These conceptions of the photograph as an essentially passive trace or imprint of its referent, akin to the fingerprint, death mask, or footprint in the sand, systematically obscure the significance of practices such as Welling's. The

problem is not that Welling's photographs do not incorporate material traces of the world; the problem is that we cannot get far in appreciating what Welling is up to so long as we focus narrowly on those features of his photographs that token the registration of light. Being told that the *Aluminum Foil* comprises a series of traces, imprints, or indices, for example, misses almost everything of interest about them – certainly anything that might explain their aesthetic appeal or their significance as art.

For all their manifold differences of emphasis and methodology, default conceptions of photography commit, implicitly, to a view of the medium as essentially receptive – more passive than active. Susan Sontag's Bazinian reflections on photographs as 'direct impressions', 'material vestiges', or 'stencils' of the real is an obvious example.¹¹ Sometimes photographic receptivity is expressed through a metaphysics of self-generation, as in Henry Fox-Talbot's infamous claim that Lacock Abbey was the first building 'that was ever yet known *to have drawn its own picture*'.¹² On Fox-Talbot's reasoning, it has to be the building that inscribes itself, through the action of light, on the sensitive surface because photographic agency is natural, not human.

Roland Barthes implicitly conceives of photography as receptive in a similar way when he characterizes the 'punctum' as the unintended but affecting marginal detail that is revealed in

the photograph, despite passing unnoticed by the photographer. So construed, the punctum is possible for Barthes precisely because the photograph records what was there, no matter what might have been of interest to the photographer. The same implicit commitment to receptivity is echoed in Barthes's more general claim that the *noeme* of photography is 'that-has-been'.¹³ Likewise, C. S. Peirce characterizes photographs as 'indexical icons' – images whose resemblance to their sources is a result of a distinctive process that ensures 'point by point' correspondence to their sources. Peirce's examples may be divided into two broad kinds: the index as trace or residue of its cause (the footprint in the sand, ashes in the grate), and the index as indication, ostention, or deixis that requires the co-presence of its referent to flesh out an otherwise empty designation (the pointing finger, the linguistic shifters, 'I', 'you', 'look!' 'that').¹⁴ Barthes '*noeme*' brings them together: that (index as ostention) has been (index as trace).¹⁵

Rosalind Krauss, whose work on the index from the late 1970s was hugely influential for art theory's inheritance of these ideas, conceives photography in broadly similar terms when she presents it – drawing freely on Barthes and Peirce – as a natural rather than conventional mode of imaging. Barthes's 'message without a code', conjoined with a Peircian view of indices as traces or residues of their causes, becomes Krauss's 'physical manifestation of a cause'.¹⁶ Much as 'the natural world [...]

imprints itself on the photographic emulsion', so the surrounding environment is 'merely registered' by the kind of site-specific installation about which Krauss was then writing.¹⁷ The conception of photography underlying this account would have been recognizable in its essentials to Joseph Nicéphore Niepce, Louis Jacques Mandé Daguerre, and William Henry Fox-Talbot, for all that Krauss is putting it to quite different uses.¹⁸

Despite their manifold (and manifest) differences, and for all that they mean different things in different contexts, these writers implicitly concur in viewing photography as more or less passively recording the world.

Until recently, philosophers were also united in conceiving of photography as essentially receptive.¹⁹ Obviously, the photographer must decide what to photograph and select a suitable vantage point, she must choose a camera, lens and film, determine what will be in focus and how to frame and expose the scene. After the fact, she may again exert control, either in the darkroom or through a software application. But all this takes place either before or after the moment of exposure. So long as the shutter is open, the mapping of features from scene to light-sensitive surface depends solely on camera and lens. Because the recording event is not itself under the agent's control, photographs are visual traces: they cannot but register

whatever is in front of the camera, subject to the camera variables applied.

A new generation of philosophers has broken with this consensus.²⁰ While they acknowledge an ineliminable moment of photographic receptivity, they also emphasize photographs' material origins. In this, they take their inspiration from the process-first approach proposed by Patrick Maynard in *The Engine of Visualization*. Maynard objected to the widespread tendency to 'consider photography in terms of its products, photographs, and then... consider some significant relationship that these products bear to some other thing or things'.²¹ What constitutes a photograph is not some special relationship photographs bear to their objects; what makes something a photograph is its genesis in a photographic process. Because Maynard himself stops short of characterizing the elements of this process, the question becomes: what is a photographic process?

The new conception builds on Maynard's idea that photography is a process by proposing that any photographic process has (at least) four stages, each of them an event.²² The first is a pro-photographic scene, a worldly happening before a photographic apparatus. (So not any bit of the world is a pro-photographic scene; its being such depends on the presence of the apparatus itself.) Second is the formation, by the photographic apparatus, of a dynamic light image, a two-

dimensional pattern of light that changes over time in concert with changes in the pro-photographic scene. The light image is not an artifactual image: in most (if not all) cases, it occurs inside the camera but it is not typically visible there (the camera obscura is one exception). Stage three is a 'photographic event', properly so called, where information contained in the light image is recorded, either chemically or electronically.²³ Even at this stage, there is no artifactual image – that is, no image made to be displayed or amenable to visual appreciation, because nobody can see the pattern of silver halide compounds in an emulsion or charged and non-charged states of metal-oxide semi-conductors in a CCD. A fourth stage of mark-making (broadly construed) is required before there is an image that can be visually appreciated. Printing with photosensitive emulsion or inkjet, projecting slides, or displaying pixels: photography exploits a rich and diverse family of technologies for rendering marked or patterned surfaces suitable for visual appreciation. Importantly, though, none of them is uniquely photographic and none suffices on its own to generate a photograph.

The new conception, building upon Maynard, has several merits. It redirects attention from product to process, which it takes to be a technology for making marked or differentiated displayable surfaces, leaving out no part of the photographic process. The moment of receptivity reduces to the photographic event, a bit of base-level causation where photons emitted or

reflected by an object modify the electrical states of semiconductors or silver halide molecules. Unlike conceptions of photography as fundamentally receptive, which stop here, the new conception includes the pro-photographic scene, the dynamic light image, and various processing and mark-making technologies as genuine constituents of photography. Because all four stages are necessary for making an image that can be visually appreciated, none can be excluded from the domain of photography 'proper'. As a corollary, the photographer acts within the domain of the 'strictly photographic' whenever she intervenes in any one of the four stages.

On this conception, an image counts as photographic so long as it implicates a photographic event in its causal history. This is photography's ineliminable moment of receptivity, but the new conception shrinks it to a point. Beyond this point, both before and after it, the new conception opens up the space of photographic possibility, prompting us to attend to the many means photographers employ to mobilize photography's causal substrate, the registration of a light image, in the service of their artistic ends. By contrast, conceptions that over-burden receptivity tend to treat photography as a black box. Welling's practice takes the lid off this box and, in doing so, demonstrates the range and malleability of the photographic process.

Work in Process

Welling's work is often viewed in terms of oppositions such as camera-less versus lens-based, abstract versus representational, analogue versus digital, or colour versus black and white. But the fluidity with which Welling moves between and across such categories suggests that parsing the work in this way misses something crucial about what he is doing. The new conception makes sense of the unity of Welling's practice, by understanding it in terms of a broader photographic process and possibility space that individual series thematize in diverse ways, depending on where in the photographic process Welling most prominently invests his agency.

Aluminum Foil focuses attention on the pro-photographic scene. As in much of Welling's work from the early eighties (*Phyllo* (1980) and *Drapes* (1981), *Gelatin* (1984) and *Tile Photographs* (1985)), the photographed scene is not found as-is, but is constructed from the ground up. Despite any initial obstacles to deciphering what one is looking at, photography is figured across these series as recording whatever is in front of the camera at the moment of exposure, just as default conceptions would have it. While the new conception accepts that the camera records whatever is before it, it also proposes a conception of the photographed scene as pro-photographic, an essential stage of the photographic process itself. In *Aluminum Foil*, the scene cannot be understood as independent of the

photographer's agency and intervention, because it has been constructed with the camera in mind. If the practice can still be understood in terms of 'the document', it is a document of a very peculiar kind – a document of what the photographer has done, off camera, with an eye to the camera that will record it. The vision of an independent, extra-photographic reality recedes: it fails to capture how the camera can be a condition not only of recording reality, but of the pro-photographic scene itself. Had there been no camera to record it, the scene would not have existed.²⁴

Contrast *Aluminum Foils* with the later *Glass House* series (2006-9) (*plate 4*). The pro-photographic scene is now Philip Johnson's *Glass House* set in the Connecticut landscape. But Welling's focus is no longer on constructing the scene; instead he undertakes to disrupt the light image that the scene casts on his camera's sensor, using what he declares to be a unique technique.²⁵ Whereas digital post-production permits precise control, filters interrupt the optics of the camera in ways that are hard to predict.²⁶ *Glass House*'s colour effects were obtained by handling coloured gel, plastic, and glass in front of the camera during exposure. In the standard trope, Welling's camera doubles the house, which is a single room, or *camera*, and a lens onto the landscape – or a Claude Glass.²⁷ Yet this cannot be the whole story, for it applies equally to any photograph of the glass

house, and so misses the particularity of Welling's interventions in the formation of the light image.

That we are being asked to attend to the particularities of Welling's way of rendering the *Glass House* is intimated by various subtle tells in the images. Looking closely, one can make out Welling, with camera and tripod, reflected in several of the head-on images (such as *0467, 2009*) (*plate 5*). This is one of the rare occasions where Welling appears in his own work.²⁸ It suggests that *Glass House* strives to embody something of his own experience of the place as he photographs it. Welling's handling of filters and glasses is a performance; indeed it is highly improvised. The series displays the kind of unexpected variation that comes with improvisation, and thereby draws attention to the presence of the performer. Welling confirms, 'when I am there, I am keenly aware that just being there is an event. The filters in a strange way amplify and double that being there'.²⁹ The point is worth pursuing. By showing himself reflected with camera in a glass house that is itself a camera in the landscape, Welling identifies his own images' 'failure' of legibility with the house's failure to tame the landscape into a series of discrete views.

Welling's procedure in *Flowers* (2004–7) is quite different. At first blush, what these images show may seem obvious. Though their colour effects are difficult to resolve, they seem to depict some kind of foliage, with a hint of strong sun

irradiating the edges (*plate 6* and *plate 7*). Yet the series poses an even greater challenge to default conceptions of photography. For in this case there was not even a worldly scene to record, if that is understood to require something prior to and independent of the camera. Rather, a pro-photographic scene has been created ex nihilo in Welling's darkroom, which has itself become a camera that Welling steps inside, so as to work directly on the photographic event.

The multi-stage process that leads to *Flowers* begins with making a photogram, a camera-less contact print generated by selectively occluding a light-sensitive surface exposed to light. Photograms are one of the oldest photographic methods, going back to Fox-Talbot's 1830s camera-less images of lace and leaves. Where Fox-Talbot used the sun, Welling uses the bulb of the enlarger. That aside, Welling's photograms are made in an entirely traditional way. Objects are laid directly onto a light-sensitive surface, which is then exposed to light. Occluded areas of the surface remain unchanged, areas exposed to light blacken when developed. In *Flowers*, however, that surface is film rather than photographic paper.

The resulting film photograms are then used as negatives to make prints with an enlarger in the standard way. In effect, Welling is creating negatives from scratch in his darkroom, without the aid of a camera. The film negatives (the original photograms) are black and white. Colour is added later, during a

second print stage, by sandwiching coloured gels in the enlarger's mixing box. Light, originally filtered by the opacity of the flowers occluding the film, is filtered for a second time by the gels so that semi-transparent tones of grey register as colours. Where the blossoms directly touched the film during the original exposure, no light will have penetrated (assuming they are opaque) leaving the film clear. Where they were merely close to the film, some light will have penetrated, producing delicate, gauzy greys – and the same will be true of anything less than fully opaque, such as translucent petals. Filtering light through coloured gels transforms these greys into hues. Because the original film images are negatives, solid shapes are rendered negatively in clear, unexposed film; at the print stage these clear areas allow light to pass freely, resulting in positive images of flowers in the form of coloured light.

It cannot be correct, as one critic writes, that the *Flowers* are 'a stunning vehicle with which to capture and represent [the] actual subject: light phenomena', as this would make the flowers merely instrumental to the depiction of light.³⁰ Light is equally a vehicle for the flowers, and the point generalizes. While the challenge of the photogram, to use objects to modulate light, may appeal to an interest in abstraction, it is just as much the challenge of photographic representation more generally to use objects to modulate light and thereby depict them. Light is both subject and vehicle.

Consider what is gained by adding colour to monochrome images. In everyday life, flowers are quintessentially coloured objects, classic tokens of beauty.³¹ Welling's *Flowers* operate in a different register. Evoking the experience of dappled sunlight beneath trees, this is not an everyday depiction of flowers as *nature morte*; it images beauty in a much deeper sense. Welling welcomes a characterization of them in terms of 'presentness', a being at home in the present, rather than dwelling on time, absence, or loss.³² *Flowers* express sheer joy in the world's visible presence and the sun's gift of light. They are the antithesis of *Aluminum Foil*. Where light struggles to penetrate the lifeless, suffocating world of the foils, here it overflows to the point of irradiating the image.

Something else about Welling's process in *Flowers* is easily overlooked but sheds light on his practice as a whole. The original photograms are made on 400 ASA Kodak Tri-X film. The film's sensitivity to all visible light precludes the use of a red safety light while exposing the photograms in the darkroom. Any light would fog the film. So the choice of film over paper necessitates that the photograms be arranged in total darkness, generating a complex interplay of activity and passivity in the making of *Flowers*. Welling exercises his agency in setting up the process and its parameters but must surrender control at the moment of execution. Though Welling can work by touch in the dark, it is only once the enlarger light is tripped, exposing the

film to light – only when it is already too late – that he sees the pattern of foliage he has placed on the film, and is able to form a determinate visual impression of how the final image might look. At the crucial moment, he is photographing blind.

Doing so demands an openness to fortuitous accident.³³ Meeting this demand indicates Welling's confidence that the world will meet him half way. Call such openness 'trust in the world'. Stronger than a disposition, it is an ability: it requires self-possession to suspend doubt for long enough to find out where blind avenues may lead. Some will see this as a generic artistic virtue – one that befits any artist who wishes to produce something new – and there is much to said for this view. But Welling's self-possession can also be seen as peculiarly photographic, for no image depends more directly on the world, one might think, than a photograph. Photographers rely on input from the world in a direct and concrete way, even if they are not constrained by it in all the ways that conceiving photography as a purely receptive affair would have us imagine. Being a photographer involves knowing what to do with, and how to respond to, what the world provides. Different kinds of photography no doubt mobilize this know-how in different ways, and at different stages of the process; but whenever a process involves trial and error, the photographer must rely on know-how and past experience to indicate the directions likely to prove profitable for exploration. At the crucial moment,

Welling may be photographing blind, but the making of *Flowers* is anything but floundering: the set up is tailor-made to solicit the fortuitous accident, the quirk of circumstance or process, that prevents Welling falling back into the trap of the tried and tested.

As *Aluminum Foil*, *Glass House*, and *Flowers* (three out of more than sixty series listed on Welling's website) suggest, Welling draws on resources at every stage of the photographic process.³⁴ We see the staging and construction of the photographic scene in *Aluminum Foil*. The landscape in *Glass House* is fashioned by redirecting the flow of light with mirrors and filters before it enters the camera, thereby impacting the formation of the light image. And the camera is often left behind altogether to direct the photographic event in the darkroom, as in *Flowers*. The idea that photographers insert themselves into the photographic process primarily by screening light is brought out in numerous ways, not limited to the selective occlusion of light, the use of more or less reflective or absorptive materials, and the iterated use of colour filters and gels. Baffles and screens of various kinds proliferate. Optical artefacts abound – not only lens flare but moiré patterns. Every imaginable print technology is used, from straight silver to inkjet, from one-stage printing to more than three, from 4 × 5" contact prints to large scale, from traditional to hybrid technologies that move freely back and forth between analog and digital, colour and black and

white. Welling is well aware that his practice implies a capacious conception of the medium: 'I'm interested in finding new ways of applying materials to a surface.... Photography is just a different way of applying material and some of my works draw out this process'.³⁵

Although important, such technical considerations are only one dimension of Welling's practice. A fourth series allows us to revisit those already considered, with a more direct eye to their expressive content and emotional valence. In *Frolic Architecture* (2010), Welling rejoins a longstanding, if often implicit, project to use the resources of photography to express the significance of history for individual lives. His stance does not reduce history to temporal distance, the 'that-has-been' of photographic cliché. It is more solicitous, even as it concedes its own limits and the impossibility of containing the past in the present without remainder. It distills a sense of what might be called the 'deep present'.

Frolic Architecture is a set of ten photograms made to illustrate a poem of the same title by Susan Howe (*plate 8* and *plate 9*).³⁶ The process builds on the one developed for *Water* (2009), where Welling immersed sheets of Chromogenic paper in water and exposed them to light prior to developing them. Prolonged soaking frees up the water-soluble blue die in the surface of the paper. By exposing the paper to light, Welling causes the paper to record an image of its own surface at the

moment of exposure. In seeing the resulting picture, one is seeing a prior semi-liquid state of the very surface one is looking at. It is hard to imagine a more direct reminder of the labour of photography; these images demand that the viewer pay attention to what has taken place – to what the photographer has done – to generate the surface they are currently seeing. Leaving no room for doubt, *Frolic Architecture* adds a layer of manual performance to the process: Welling folds sheets of mylar and contact prints them to silver gelatin paper. Contact printing is, as the name suggests, laying one surface (typically a negative) onto another (typically a sheet of photographic paper), holding the two flat with a sheet of glass and exposing to light, thereby producing an inversion of the negative on the print. In this case the ‘negatives’ are hand-rendered: Welling adds paint before or after folding the sheets of mylar, until they are rendered opaque, such that no light can pass through them to form an image. The resulting images are scanned and inkjet printed, before being bound into books.

With *Frolic Architecture*, there is a direct connection between how the work has been made and its content, a connection that is thematized within the work itself. Its making echoes the work of both Howe and her principal sources, the New England revivalist theologian Jonathan Edwards and his sister Hannah Edwards Wetmore, who kept a diary in the 1730s on large folio sheets folded into small panels. Books are made

from the same folded sheets, the folds cut away to leave pages. Howe's poem sequences collages of photocopied text that she snips, twists, and tapes onto the page. When read aloud, snippets of visible text become phoneme fragments that ventriloquize the past in an elusive voice, as though one were overhearing fragments of a conversation that only just reaches the threshold of intelligibility.³⁷ Combined with Howe's text, Welling's images recall his earlier photographs (taken in 1977–86) of pages of his own great-great-great grandparents' travel diaries from their grand tour in 1840–41 (*plate 10*).³⁸ Some pages are shown in full, some partially, some highlight the elegance of the script, the deep black ink, the texture of the paper. Many include pressed objects or slips of paper, material fragments of stops along the tour. In both series, the handling of materials forges a link to the material, if fragmented, reality of the Edwards and the Dixons – in the case of Welling's painterly images, the expressive gesture summoning up the script of his forbears.

Unlike portrait photography, which figures subjectivity as autonomous and self-contained, *Frolic Architecture* and *Diary/Landscape* represent it metonymically and partially, through its material traces. Domestic rather than heroic, the past self bleeds into the present through barely overheard snatches of conversation, fragments of script, dried flowers and other mementos. This is not some simple exercise of recollection; instead, the material traces of past subjectivity are

rematerialized through the workings of photography. We are reminded just how much photography involves the handling of physical materials in addition to the screening and control of light. Contrary to expectations, abstraction here embodies, in muted form, the afterlife of the historical by means of the material processes of photography.³⁹

Frolic Architecture and *Diary/Landscape* attend, in different ways, to the afterlife of the past in the present, thereby distilling a sense of the presence's depth. *Flowers* suggests a welcoming of the present moment, a 'being-in-the-present' rather than a dwelling on absence or loss. Yet *Aluminum Foils* and *Glass House* suggest something much more equivocal. *Aluminum Foils* seem to wall up space in such a way as to emphasize the impenetrability and obduracy of the depicted world. These are alien, inhuman spaces, grave-like environments devoid of oxygen or light. Where *Flowers* suggests a free welcoming of the world, these early works are their inverse.

The idea of being – or not being – at home in the world is a latent theme of Welling's work more generally. Johnson's *Glass House* is in Connecticut, where Welling grew up and his family history runs deepest. Several of Welling's apparently more straightforward series, not considered here, have documented aspects of the Eastern seaboard, including its railways and architecture. But if Connecticut in some sense

signifies 'home' for Welling, then it operates in his work more as an idea or beacon than as a physical location. It signifies what it might mean were we able – and we are not – to close the gap between mind and world.

For much of the modern aesthetic tradition, to find something beautiful is itself to feel at home in, or at one with, the world in a metaphysically significant way. Natural beauties such as flowers – perhaps precisely because they are fleeting – have traditionally functioned as classic tokens of such significance. In Immanuel Kant's foundational version of this thought, the distinctively cognitive, rather than merely sensory, pleasure afforded by beautiful nature hints that the natural world may 'favour' us in some way. To find nature beautiful is to come across something that strikes us as so suited to the interaction and attunement of our most fundamental sense-making capacities that it seems as if – but only as if – it were designed for that very purpose. In this way, natural beauty intimates that, despite nature's potentially bewildering complexity, our epistemic and moral goals of making systematic sense of it and acting freely within it may not be in vain. The subjective qualification is crucial: the thought concerns how human beings are constrained to view nature, in so far as they aspire to make systematic sense of or act freely within it. The claim is not about how nature is in itself, which is something that we cannot know and should not pronounce upon, lest we

fall back into the sense-transcending claims of speculative metaphysics. Nonetheless, the unexpectedness and sheer welcome of this intimation is grounds for pleasure. This is what Kant means when he calls beauty ‘subjectively purposive’: the kind of cognitive stimulation it affords is suited to furthering our most basic epistemic and moral projects.⁴⁰

Assuming that this Kantian thought articulates what it would mean, metaphysically, to feel ‘at home’ in the world, *Glass House* suggests that the feeling can only be approached asymptotically, through a series of partial, disorienting views. Pulsating with colour and jarring superimpositions, *Glass House* hardly suggests harmonious, contemplative repose. Instead, light throbs and colour is overwhelming: sometimes stifling, sometimes blinding or bone-chilling, sometimes jumpy, nervous, and edgy – always ‘visually intoxicating’.⁴¹ Welling’s description of the series as an analytic decomposition of vision into its trichromatic channels is potentially misleading: for it leaves out how the channels are made to interfere with each other, subverting the optical legibility of which Johnson’s *Glass House* is an icon. Reflecting materials held before the camera layer and rearrange the landscape in ways that are impossible to resolve. In *9818, 2009*, for example, the sun on the photographer’s back reappears above the house so as to transform the entire landscape, and not just that bit of it that falls within his camera’s field of view (see *plate 4*). The images seem

to capture an experience of the world as resisting the mind's organization of sensation into a coherent, cognitively well-ordered reality – an experience that William James described as 'one great blooming, buzzing confusion' cognitively prior to 'our location of all things in one space'.⁴² The ideology of the glass house as an architectural type is that it tames and interiorizes its site by turning it into a series of vistas. As Johnson famously quipped: 'Nature is the most expensive wallpaper'. In Welling's *Glass House*, by contrast, the Connecticut landscape is a force that cannot be contained, but always outstrips the order the house seeks to impose. In Jamesian terms, it outruns the synthetic powers of mind, for which the house – itself a camera – serves as a metaphor or analogue. Unlike Johnson's *Glass House*, Welling's is closer to James's experience of refusal, breakdown, and perpetual deferral of legibility and sense.

Photography, Mind, and Self

How does re-conceptualizing photography help us to understand Welling's practice as it has been presented here – as both rich in formal, technical experimentation, and thematically dense and complex? On any conception that would identify photography with an event of transcription, much of what Welling does may be 'photographic', or perhaps 'photographically derived', it cannot be photography, strictly speaking. For the same reason,

any thematic, emotional, or intellectual concerns that Welling addresses by intervening in the pro-photographic scene, the light image, or post-recording processes will by necessity reside outside the domain of photography. Welling's concerns might explain why he does what he does, but they cannot explain what makes what he does photography, as long as photography is conceived as a mode of receptivity – an essentially natural (non-agential) registration of a light image, akin to the footprint in the sand. The revised conception proposed here represents photography much more capaciously, revealing Welling's exploration of diverse photographic materials and processes to be a coherent exploration of a unified domain of photographic possibility.

Aluminum Foil, Glass House, Flowers, and Frolic Architecture involve different stages of the photographic process. To what end does Welling explore this space of photographic possibility? Granted, he thematizes the richness of the photographic process. But why? Can the new conception also help us bring out a unity at the level of his expressive and poetic concerns? His more perceptive critics acknowledge the traces that such concerns have left in his work, but to date have done little more than label them – as 'aching beauty' and 'vulnerability', or the 'sensuous' and 'sheerly aesthetic'.⁴³ Moreover, these labels leave mysterious the connection between Welling's passion for materials and processes and the deeper

metaphysical and poetic concerns of his work. An adequate conception of photography needs to do more than merely fencepost the boundaries of a technology; it has to equip us to investigate what can be done with it. Refusing to treat it as a black box, Welling understands the camera as an apparatus engineered over centuries to produce a coherent image of the world in accordance with a highly specific set of pictorial conventions:

You have the history of image-making always on the surface of any photograph you make. All these technicians made all these decisions about what kind of light rays will be rendered on this material surface. When you take a piece of chalk and a piece of paper, no one is telling you what to do. But photography is so specific about what can be rendered... that specificity is something that I have always found exciting.⁴⁴

By drawing attention to what it is and is not possible to render photographically, and its history, Welling equates photographic processes in general (and not merely the camera) with the synthetic, 'sense-making' capacities of mind.

A central tradition in modern philosophy, originating in Kant and continuing into contemporary philosophy of mind,

takes the basic problem of mind to be one of clarifying the relation between 'spontaneity' and 'receptivity'.⁴⁵ The relation is between the conceptual structure spontaneously imposed by mind on matter provided by the world. Both are conditions of coherent experience: spontaneity is a condition of making sense and receptivity is a condition of experience having some content to make sense of. According to this tradition, the spontaneous mind 'synthesizes' (constructs, combines, brings together) coherent experience of an objective world from passively received external input. Developed as a tool for standardized imaging, the camera itself is a supreme example of spontaneity: it builds the synthetic powers of cognition into the apparatus itself. But photographic spontaneity transcends the camera; it pervades any use of photographic materials to make sense of the stimuli received from the world. Taken as a whole, Welling's oeuvre not only shows us this sense-making in action, but also where it breaks down.

This conception of photography as an achievement of representation reverses the standard picture of photography as pure receptivity, a process for passively recording appearances. Yet spontaneity always runs up against what is outside itself, given that experience is not a product of mind all the way down. For just this reason, exploring the realm of photographic possibility limns the boundaries of spontaneity. In Welling's work, states of heightened emotion dramatize the self's attempts

to make sense of its world. A vertiginous world induces the stifling confinement of the *Aluminum Foils* and the buzzing profusion of *Glass House. Flowers* capture the joy of being in the present moment, while *Frolic Architecture* mines the present for the fragmentary echoes of the past.

But Welling's individual projects do not merely present the constitutive relation between mind and world impersonally, by using photographic materials and processes as an analogy for the world-constructing, sense-making powers of mind. Though this is a concern of Welling's work as a whole, his more powerful series catalyze a particular mood or feeling to embody the experience of an individual, empirical self as it tries to make sense of its world. This requires careful unpacking. The relation between self and world is neither Welling's subject-matter nor his work's thematic content, if that is taken to mean what it depicts. His images depict a broad swath of things, and some of them do not depict at all. Rather, various possible relations of self to world are enacted through Welling's explorations of the resources of photography.

Photography, Welling's practice implies, is at root a relation between two terms – not only photograph and world, but also photographer and world. Photography's medium is the screening of light at some stage of making an image, plus the manipulation of various materials and image-rendering processes. Light is not only a condition of photography, but also

its limiting threat. Without at least one light exposure there can be no photograph, but too much or too little light, or the right amount but at the wrong time, and the image will be fogged or destroyed entirely.⁴⁶ If photography is a relation between a photographer and world, and light is the medium of that relation, then Welling's manipulation of light acknowledges the vulnerability of the human individual to the twin prospects of being overwhelmed (over-exposed or flooded) by the richness of what the world has to offer or of being under-nourished (under-exposed, under-developed) by the paucity of what it provides. The surfeit of light in *Flowers* and the poverty of light in *Aluminum Foils* – the one irradiating to the point of eating away the image, the other being sucked away into darkness – express these twin possibilities. Other series, such as *Light Sources*, occupy a middle ground of equanimity, even attentiveness and openness to whatever the world presents to view.

It is important to see that the relation between a priori mind, empirical self, and world operates at two distinct levels throughout Welling's practice. At the level of his practice as a whole, the persistence with which Welling mobilizes the diverse resources of photography draws attention to the relation between mind and world at an impersonal, constitutive level. By making use of such a broad range of processes, including (but not limited to) camera-based operations, his oeuvre foregrounds the constitutive, sense-making dynamic of mind and world per se.

At the level of the individual series, however, the work thematizes a variety of psychological responses to the empirical self's dependence on its world. At this level, it is no longer some impersonal or constitutive relation between mind and world that is at stake – it is Welling's.

This may explain the seam of 'recessive autobiography' that seems to permeate many of Welling's projects, in much the same way as the metaphysics of home and its vicissitudes, from the fleeting appearance of his face in the early student work *Film* (1971) to his occasional reflection with camera and tripod in *Glass House*, including the allusions in many series to family and personal history. This persistent, if recessed, aspect of Welling's practice intimates that photography comes not from the resources of photography conceived impersonally, but from an individual photographer's way of interacting with light, materials, and processes.

Conceptions of photography as receptive make no room for any of this because they effectively shrink what makes a depiction photographic to an event of transcription. Shrinking photography to the transcription event in this way may isolate what distinguishes photography from other forms of depiction, but it also ensures that whatever photographic artists do, they do outside of the domain of photography, strictly speaking. It unacceptably curtails the prospects for understanding photographic art if we must think that the very activities that

make photographs art cannot also be the ones that make them photographs. The conclusion can only be that they are art, despite being photographs. Not so on the new conception: they are art at least partly because they are photographs.

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By his own admission, at the outset of his career Welling cultivated an aesthetics of opacity, density, and difficulty, which he equated with ‘subjectivity, style, and gesture’.⁴⁷ In doing so, he embarked on a way of making photographs that put, and continues to put, photographic agency centre-stage.

Photographic agency is not simply acting by means of making photographs, though traditional thinking about photography has a hard time granting even that.⁴⁸ It is an agency enacted within the space of photography, a space that turns out to be much more capacious than is often supposed, at the point where the spontaneity of mind and the feeling self meet the materiality of world.

Notes

Our thanks to David Campany, Gordon Hughes, Margaret Iversen, Karen Lang, Richard Neer, Michael Newall, John O’Brian, the journal’s anonymous referees, and especially James Welling for comments on this paper in draft.

¹ Lady Elisabeth Eastlake expresses this view as early as 1857: ‘The power of selection and rejection... the marriage of his own mind with the object before him, and the offspring, half stamped with his own features, half with those of Nature, which is born of the union—whatever appertains to the free-will of the intelligent being, as opposed to the obedience of the machine—this...constitutes that mystery called Art, in the elucidation of which photography can give valuable help simply by showing what it is not’ – Eastlake, ‘Photography’, *The London Quarterly Review*, 101, April 1857, 442–68, reprinted in *Classic Essays on Photography*, ed. Alan Trachtenberg, New Haven, 1980, 66. Henry Peach Robinson, allegorical painter turned photographer, concurred—at least about *pure* photography: ‘A pure, unadulterated machine-made photograph... is the most perfect specimen of realism the world could produce; useful in a thousand ways, it would not be art any more than a minute catalogue of the facts of nature, however full of insight is a poem’ – Robinson, *Elements of a Pictorial Photograph*, London, 1896, 70. Robert Demachy, champion of the painterly Gum bichromate process, believed it overcame such worries. See Demachy, ‘On The Straight Print’, reprinted in *Photographic Theory: An Historical Anthology*, ed. Andrew Hershberger, Oxford, 2014, 115. Many of the features such authors condemned were celebrated by Modernists like Paul Strand: ‘Without the slightest realization that in this machine, the camera, a new and unique instrument had been placed in their hands, photographers have in almost every instance been trying to use it as a short cut to an accepted medium, painting... We find all through the work done...a singular lack of perception and respect for the basic nature of the photographic machine. At every turn the attempt is made to turn the camera into a brush, to make a photograph look like a painting... like anything but a photograph’ – Strand, ‘Photography and the New God’, reprinted in *Classic Essays on Photography*, 147-8. Similar ideas underpin mainstream philosophical reflection on photography. See Roger Scruton, ‘Photography and

Representation', *Critical Inquiry*, 7:3, 1981, 577–603; Gregory Currie, 'Photography, Painting and Perception', *Journal of Aesthetics and Art Criticism*, 49:1, 1991, 23–9; and Gregory Currie, 'Visible Traces: Documentary and the Contents of Photographs', *Journal of Aesthetics and Art Criticism*, 57:3, 1999, 283–97. For an overview, see Diarmuid Costello, *On Photography: A Philosophical Inquiry*, London, 2018, chs. 1–2.

² See Diarmuid Costello, Margaret Iverson and Joel Snyder, eds., Agency and Automatism: Photography as Art Since the Sixties, a special issue of *Critical Inquiry* 38:4, 2012, and Michael Fried, *Why Photography Matters as Art as Never Before*, New Haven, 2008. On the social determinants of the production and reception of photographs see, for example, John Tagg, *The Burden of Representation: Essays on Photography and Histories*, London, 1988.

³ James Welling is an American artist, born 1951, who came to prominence in the early 1980s as part of the 'Pictures' generation, which took its name from the 1977 exhibition curated by Douglas Crimp at New York's Artists Space. Though not part of the Artists Space show, Welling exhibited alongside many of those included, such as Cindy Sherman and Sherrie Levine, at Metro Pictures, New York. Early criticism by Abigail Solomon-Godeau and Rosalind Krauss, among others, contextualized the early work as an archetypal instance of postmodern photography. More recently, Walter Benn Michaels and Michael Fried, among others, have sought to reclaim Welling for Modernism. See <http://jameswelling.net> for both the work and criticism.

⁴ László Moholy-Nagy photogram, *Diagram of Forces* (1938–43, fgm 307), might be thought to anticipate the *Foils* – at least formally. The work is unique in Moholy-Nagy's oeuvre for dispensing with objects to modulate light in favour of wetting and crumpling the photographic paper prior to exposure in order to generate an image. In terms of process, this brings it closer in spirit to some of Welling's later, darkroom-based series such as *Water*

(2009) or *Fluid Dynamics* (2012). *Moholy-Nagy: The Photograms*, eds. Renate Heyne and Floris Neusüss, Ostfildern, 2009, 241–2. Our thanks to an anonymous referee for drawing our attention to this work.

⁵ James Welling, personal correspondence.

⁶ David Salle and James Welling, 'Images That Understand Us: A Conversation with David Salle and James Welling', *LA/CA Journal*, 27, June/July 1980, 54. Welling has also commented on the 'pumped up' emotion of his early work.

⁷ The control of light also requires the control of shadow. See Hagi Kenaan, 'Photography and Its Shadow', *Critical Inquiry*, 41:3, 2015, 541–72.

⁸ Rosalind Krauss, 'Photography and Abstraction', in *A Debate on Abstraction*, New York, 1989, 66.

⁹ E.g. Rosalyn Deutsche, 'Darkness: The Emergence of James Welling', in *James Welling: Abstract*, Brussels, 2002; Michael Fried, 'James Welling's *Lock*, 1976', in *James Welling: Photographs 1974–1999*, Columbus, 2000; and Walter Benn Michaels, 'The Photographic Surface', in *James Welling: Photographs 1977–90*, ed. Ulrich Loock, Bern, 1990.

¹⁰ We thank two anonymous referees for urging us to make this distinction and address its implications.

¹¹ Susan Sontag, 'On Photography', London, 1977, 154. Sontag is channeling André Bazin, 'The Ontology of the Photographic Image', in *What Is Cinema?* trans Hugh Gray, Berkeley, 1967. On this, see Peter Geimer, 'Image as Trace: Speculations about an Undead Paradigm', *differences*, 18:1, 7–28.

¹² William Henry Fox-Talbot 'Some Account of the Art of Photogenic Drawing, or, The Process by Which Natural Objects May Be Made to Delineate Themselves Without the Aid of the Artist's Pencil' (1839), in Beaumont Newhall, *Photography: Essays and Images*, London, 1981, 28 (italics in the original). For a discussion, see Peter Giemer "'Self-Generated" Images', in

Releasing the Image: From Literature to New Media, ed. Jacques Khalip and Robert Mitchell, Stanford, 2011, 40–56.

¹³ Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard, London, 1984, §20, §32 respectively. Here Barthes and Bazin are in complete accord: ‘production by automatic means has radically affected our psychology of the image [...] in spite of any objections the critical spirit may offer, we are forced to accept as real the existence of the object reproduced’ – Bazin, ‘The Ontology of the Photographic Image’, 13–14. Similarly, Barthes’s claim that the punctum ‘does not necessarily attest to the photographer’s art; it says only that the photographer was there [...] that he could not *not* photograph the partial object at the same time as the total object’ (§20) is entirely consistent with Benjamin’s gloss on the photograph of Dauthendey and his betrothed: ‘[n]o matter how artful the photographer, no matter how carefully posed his subject, the beholder feels an irresistible urge to search such a picture for the tiny spark of contingency with which reality has, so to speak, seared the subject’ – Walter Benjamin, ‘A Small History of Photography’, in *One Way Street*, London, 1979, 243.

¹⁴ On the index, see Charles Sanders Peirce, ‘Logic as Semiotic: The Theory of Signs’, in *Philosophic Writings of Peirce*, New York, 1955; and ‘Icon, Index, and Symbol’ and ‘Three Kinds of Sign’, in *Collected Papers of Charles Sanders Peirce*, ed. Charles Hartshorne and Paul Weiss, Cambridge, 1932. On competing senses of indexicality in Peirce, see Mary Ann Doane, ‘The Indexical and the Concept of Medium-Specificity’, *differences*, 18:1, 2007, 128–52; and Margaret Iversen, ‘Indexicality: A Trauma of Signification’, in *Photography, Trace, and Trauma*, Chicago, 2017.

¹⁵ ‘In Photography I can never deny *the thing has been* there. There is a superimposition here: of reality and of the past. And since this constraint exists only for Photography, we must consider it, by reduction, as the very essence (the *noeme*) of Photography.... The name of Photography’s *noeme* will therefore be: “That-has-been”’ – Barthes, *Camera Lucida*, 76–7.

¹⁶ See notes 10 and 11 for the sources in the writings of Barthes and Peirce.

¹⁷ Rosalind Krauss, 'Notes on the Index: Part 2' (1977), reprinted in *The Originality of the Avant-Garde and Other Modernist Myths*, Cambridge, 1986, 211-2. In addition to Peirce, Krauss is relying on Barthes early essays on photography here, notably 'The Photographic Message' (1961) and 'The Rhetoric of the Image' (1964) reprinted in *The Responsibility of Forms*, trans. Richard Howard, New York, 1985. For criticisms of selective uses of Peirce in art theory, including Krauss's own, see Joel Snyder, 'Picturing Vision', *Critical Inquiry*, 6:3, 1980, 499-526; Michael Leja, 'Peirce, Visuality, and Art', *Representations*, 72, 2000, 97-122; James Elkins, 'What Does Peirce's Sign Theory Have to Say to Art History?' *Culture, Theory, and Critique*, 44:1, 2003, 5-22; Joel Snyder, 'Pointless', in *Photography Theory*, ed. James Elkins, New York, 2007, 369-85; and Kris Paulsen, 'The Index and the Interface', *Representations*, 122:1, 2013, 83-109.

¹⁸ See Joseph Nicéphore Niepce, 'Memoire on the Heliograph', and Louis Jacques Mandé Daguerre, 'Daguerreotype', reprinted in *Classic Essays on Photography*, and William Henry Fox-Talbot, 'Introductory Remarks', in *The Pencil of Nature*, London, 1844.

¹⁹ Scruton, 'Photography and Representation'; Kendall Walton, 'Transparent Pictures: On the Nature of Photographic Realism', *Critical Inquiry*, 11:2, 1984, 246-77; Currie, 'Photography, Painting, and Perception'; Jonathan Cohen and Aaron Meskin, 'On the Epistemic Value of Photographs', *Journal of Aesthetics and Art Criticism*, 62:2, 2004, 197-210; Robert Hopkins, 'Factive Pictorial Experience: What's Special about Photographs?' *Noûs*, 46:4, 2010, 709-41; and Scott Walden, 'Photography and Knowledge', *Journal of Aesthetics and Art Criticism*, 70:1, 2012, 139-49. For an overview, see Diarmuid Costello and Dawn Phillips (Wilson), 'Automatism, Causality, and Realism: Foundational Problems in the Philosophy of Photography', *Philosophy Compass*, 4:1, 2009, 1-21.

²⁰ Dawn M. Phillips (Wilson), 'Photography and Causation: Responding to Scruton's Scepticism', *British Journal of Aesthetics*, 49:4, 2009, 327–40; Paloma Atencia-Linares, 'Fiction, Nonfiction, and Deceptive Photographic Representation', *Journal of Aesthetics and Art Criticism*, 70:1, 2012, 19–30; Dominic McIver Lopes, *Four Arts of Photography*, Oxford, 2016; Diarmuid Costello, 'What's So New about the "New" Theory of Photography?', *Journal of Aesthetics and Art Criticism*, 75:4, 2017, 439–52; and *On Photography*, London, 2018. Their views vary in details not relevant here.

²¹ Patrick Maynard, *The Engine of Visualization: Thinking Through Photography*, Ithaca, 1997, 14.

²² The first to articulate multiple stages was Phillips (Wilson), 'Photography and Causation'.

²³ Sometimes only a fine line separates photography from related technologies. For example, the eighteenth-century Physionotrace is not photographic only because the recording event is not chemical or electronic.

²⁴ The work of Thomas Demand consists largely of 'documents', in this sense, though in Demand's case the story is complicated by the fact that the pro-photographic scene itself typically derives from photojournalism.

²⁵ Sylvia Lavin, 'A Conversation with Sylvia Lavin', *James Welling: Glass House*, Bologna, 2010, 33.

²⁶ Lavin, 'A Conversation with Sylvia Lavin', 33.

²⁷ Lavin, 'A Conversation with Sylvia Lavin', 28.

²⁸ Another is his super-8 student work, *Film* (1971).

²⁹ Lavin, 'A Conversation with Sylvia Lavin', 30.

³⁰ Noam M. Elcott, 'The Shadow of the World: James Welling's Abstract and Camera-less Photography', *Aperture*, 190, Spring 2008, 32.

³¹ E.g. Edmund Burke, *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful*, Oxford, 1990, 105.

³² Lynne Tillman, 'James Welling in Conversation with Lynne Tillman', in *Flowers*, New York, 2007, n.p.

³³ One can see the influence of John Cage and Merce Cunningham, whom Welling met in 1970 at Carnegie Mellon University, in his various experiments with chance procedures.

³⁴ This paper focusses on the first three stages of the photographic process. This is where Welling has done most to demonstrate the capaciousness of photography, though in recent series he has begun to thematize post-production mark-making much more prominently. See, for example, *Flowers* (2014), *MoMa Sculpture Garden* (2014–16), *Choreograph* (2014–16) and other ‘multi-channel works’ documented on Welling’s website, <<http://jameswelling.net/multichannel-works>>.

³⁵ James Crump, ‘Ventriloquisms: The Art of James Welling’, in *James Welling: Monograph*, New York, 2013, 78.

³⁶ Susan Howe and James Welling, *Frolic Architecture*, New York, 2010; reprinted in Susan Howe, *That This*, New York, 2010, 37–95.

³⁷ Susan Howe and David Grubbs, ‘Frolic Architecture: A Performance’, Woodberry Poetry Room, Harvard University, 1 November 2011, <<http://youtu.be/xR6cfDFTL8Q>>.

³⁸ *Diary/Landscape* combines images of the Connecticut landscape with images of travel diaries from 1840–41, the years immediately after the announcements of the Daguerreotype and Fox-Talbot’s Calotype at the French Academy of Sciences and the Royal Society respectively.

³⁹ *Frolic Architecture* thereby offers a clue to understanding diverse series with historical themes – the *Degradés* (1986–2006), the *Railroad Photographs* (1987–94), the revivalist architecture of H. H. Richardson (1988–94) and the *Calais Lace Factory* (1993). The inky tonality of all but the first reproduce, in a photographic register, the materiality of their subject matter. The *Degradés*, by contrast, employ abstractions of coloured light to recall the liveries of defunct railroad companies, demonstrating that historical themes transcend any neat division of Welling’s oeuvre into abstract and representational.

³³ Thus the paradigmatic form of aesthetic judgement in Kant takes the form, 'This rose is beautiful'. See the *Critique of Judgement*, trans. Werner S. Pluhar, Indianapolis, 1987, §8, p. 59 (Ak. 215).

⁴¹ Lavin, 'A Conversation with Sylvia Lavin', 21.

⁴² William James, *Principles of Psychology*, New York, 1890, 488.

⁴³ Deutsche, 'Darkness', 15; and Fried, 'James Welling's *Lock*, 1976', 26.

⁴⁴ Chris Balaschak, 'Abstract, Representational, and So Forth: An Interview with James Welling', *Octopus*, 4, 2008, 159. Cf. Snyder, 'Picturing Vision', on the design of early cameras to replicate Renaissance painting's use of single-point perspective.

⁴⁵ Kant, *Critique of Judgement*; see also John McDowell, *Mind and World*, Cambridge, 1994.

⁴⁶ Cf. Mark Godfrey, 'Light, Loss, Love: James Welling's *Light Sources*', in *James Welling: Monograph*.

⁴⁷ Jan Tumlir, '80s Then: James Welling Talks to Jan Tumlir', *Art Forum*, April 2003, 217.

⁴⁸ For the historical background, see note 1 above. The view comes out clearly in the influential writings of Bazin and Stanley Cavell. According to Bazin, 'No matter how skillful the painter, his work was always in fee to an inescapable subjectivity. The fact that a human hand intervened cast a shadow of doubt over the image. [...] For the first time [in photography], between the originating object and its reproduction there intervenes only the instrumentality of a non-living agent. For the first time an image of the world is formed automatically, without the creative invention of man' – Bazin, 'The Ontology of the Photographic Image', 13. Cavell concurs: 'Photographs are not *hand-made*; they are manufactured. And what is manufactured is an image of the world. The inescapable fact of mechanism or automatism in the making of these images is the feature Bazin points to as "[satisfying] once and for all and in its very essence, our obsession with realism"'. As a result, '[photography] overcame subjectivity in a way undreamed of by painting, a

way that could not satisfy painting, one which does not so much defeat the act of painting as escape it altogether: by *automatism*, by removing the human agent from the task of reproduction’ – Cavell, *The World Viewed*, Cambridge, Mass, 1979, 20, 23. For criticism of ‘non-agential’ conceptions of photography see Joel Snyder, ‘Photography, Vision and Representation’, *Critical Inquiry*, 2:1, 1975), 143–60; Dominic McIver Lopes, ‘Afterword: Photography and the “Picturesque Agent”’, *Critical Inquiry*, 38:4, 2012, 855–869; and Diarmuid Costello, “‘But I *am* Killing Them!’ Reply to Charles Palermo and Jan Baetens on Agency and Automatism’, *Critical Inquiry* 41:1, 2014, 178–210.